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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALLELE SPECIFIC PRIMER EXTENSION

(57) Abstract: A method of characterizing a nucleic acid sample is provided that includes the steps of: (a) conducting a DNA polymerase reaction that includes the reaction of a template, an allele specific primer, at least one terminal phosphate-labeled nucleotide, DNA polymerase, and optionally an enzyme having 3' ? 5' exonuclease activity when the primer is non-hydrolyzable, which reaction results in the production of labeled polyphosphate; (b) permitting the labeled polyphosphate to react with a phosphatase to produce a detectable species; (c) detecting the detectable species; and (d) characterizing the nucleic acid sample based on such detection.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/27286

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12P 19/34

US CL : 435/91.2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 91.1, 91.2, 183; 436/94; 536/23.1, 24.3, 24.33, 25.3, 25.32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,255,083 B1 (WILLIAMS) 03 July 2001 (03.07.2001), see entire document,	1, 8-10, and 13
---	especially see columns 2, 3, and 19-21.	-----
Y		5-7, 11, 14, 15, and 24-28
Y	US 5,518,900 A (NIKIFOROV et al) 21 May 1996 (21.05.1996), see entire document,	5-7, 14, and 15
Y	especially see column 4, lines 56-67 and column 13, lines 51-65.	
Y	US 5,759,772 A (KIRKPATRICK et al) 02 June 1998 (02.06.1998), see column 3, lines 24-36.	11
Y	US 5,270,185 A (MARGOLSKEE) 14 December 1993 (14.12.1993), see column 7.	24-27
A,P	US 2003/0134807 A1 (HARDIN et al.) 17 July 2003 (17.07.2003), see entire document, especially see [0223].	1-4, 8-10, 12, 13, and 28

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance
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 "P" document published prior to the international filing date but later than the priority date claimed

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 "&" document member of the same patent family

Date of the actual completion of the international search

15 June 2004 (15.06.2004)

Date of mailing of the international search report

02 JUL 2004
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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

STN and EAST

Search terms: polymerase, pyrophosphate or ppi, primer, phosphatase, terminal or end, and sequencing